

WE CLAIM

1. An isolated complex comprising an interleukin-22 receptor molecule, and an interleukin-20 receptor β molecule.
2. The isolated complex of claim 1, wherein each of said molecules are mammalian molecules.
3. The isolated complex of claim 2, wherein each of said molecules are human molecules.
4. A method for inhibiting effect of interleukin-22 on a cell, comprising contacting said cell with a molecule which inhibits interaction of interleukin-10 receptor β molecules with interleukin 22 receptor molecules, in an amount sufficient to inhibit said interaction.
5. The method of claim 4, wherein said molecule is an antibody.
6. The method of claim 4, wherein said cell is a cell of a patient suffering from an interleukin-9 associated disorder.
7. The method of claim 6, wherein said disorder is asthma, an atopic allergy, excess IgE production, gut inflammation, or insufficient IgG production.
8. The method of claim 4, wherein said molecule is a soluble form of one of interleukin-10 receptor β or interleukin-22 receptor.
9. The method of claim 4, wherein said molecule is a mutant of IL-19 or a mutant of mda-7, wherein said mutant of IL-19 or mutant of mda-7 retains receptor affinity but has lost activity.
10. A method for inhibiting effect of interleukin-20 (IL-20) on a cell, comprising contacting said cell with at least one inhibitor molecule selected from the group consisting of (i) an inhibitor of IL-22R, (ii) an inhibitor of IL-20R α , (iii) an inhibitor of IL-20R β , and (iv) an inhibitor of a complex of IL-22R and IL-20R β , in an amount sufficient to inhibit binding of IL-20 to said cell.
11. The method of claim 10, wherein said cell is a skin cell.
12. The method of claim 10, wherein said inhibitor is an antibody.
13. The method of claim 10, comprising contacting a cell of a subject suffering from a condition characterized by inappropriate proliferation of skin cells.

14. The method of claim 13, wherein said condition is atopic dermatitis, psoriasis, seborrhoeic keratitis, a neoplasm, or a keratoderma.

15. A method for determining if a substance has epidermal cell proliferation inhibition activity, comprising admixing a sample of epidermal cells which present an IL-20 and a substance to be tested, measuring epidermal cell proliferation, and comparing said proliferation to proliferation resulting from admixing a sample of said epidermal cells with IL-20 alone, a decrease in proliferation being indicative of epidermal cell proliferation inhibition activity of said substance.

16. The method of claim 15, wherein said epidermal cells are skin cells.

17. A method for inhibiting effect of interleukin 22 on a cell, comprising contacting said cell with a molecule which inhibits interaction of interleukin 22 receptor molecules and interleukin 20 receptor β molecules, in an amount sufficient to inhibit said interaction.

18. The method of claim 17, wherein said cell is a cell of a patient suffering from an interleukin-9 associated disorder.

19. The method of claim 18, wherein said disorder is asthma, an atopic allergy, excess IgE production, gut inflammation, or insufficient IgG production.

20. A method for identifying a molecule which modulates activity of IL-20 or mda-7, comprising admixing a cell which expresses IL-22R and IL-R β with said molecule and one of IL-20 and mda-7, determining effect of said IL-20 or mda-7 on said cell in the absence of said molecule to determine if said molecule modulates activity of said IL-20 or mda-7.

21. A method for identifying a molecule which modulates activity of IL-19 or mda-7, comprising admixing a cell which expresses IL-20R α and IL-20R β with said molecule and one of IL-19 or mda-7, determining effect of said IL-19 or mda-7 on said cell, and comparing effect of said IL-19 or mda-7 on said cell in the absence of said molecule to determine if said molecule modulates activity of IL-19 or mda-7.

22. A method for inhibiting effect of at least one of mda-7 and IL-19 on a cell, comprising contacting said cell with a molecule which inhibits interaction of IL-20R α and IL-20R β , in an amount sufficient to inhibit said interaction.

23. The method of claim 22, wherein said molecule is an antibody.
24. The method of claim 22, wherein said molecule is a soluble form of IL-20R α or a soluble form of IL-20R β .
25. The method of claim 22, wherein said molecule is a mutant form of IL-20 which retains affinity for a complex of IL-20R α and IL-20R β , but has lost activity.

TOP SECRET//SCI TECH 660